

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A sensor and print-head ~~(2)~~-assembly comprised in a housing ~~(1)~~ for a hand-held and hand-operated printing device controlled by a processor ~~(4)~~, comprising at least one sensor means ~~(S0, S1)~~, a print-head array ~~(60)~~, input means ~~(6)~~ on said housing ~~(1)~~ connected to said processor ~~(4)~~ for input of assembly control commands, and means for keeping track of the assemblies and print-heads position on a print medium, **characterized** in that it comprises for a print out sweep with said array:

means for determining the x and y coordinates for at least one distal end ~~(76, 78)~~ of at least one row ~~(70)~~ of printing means in said print head array ~~(60)~~, and the angle of rotation of said row ~~(70)~~ with reference to a base line, made up of coordinates for the long side of an image stored to be printed, whereby every dot of a part of an image to be printed having determinable corresponding x and y coordinates related to a determined position for said row ~~(70)~~;

means for determining an x and y coordinate for a first tangent ~~(80, 82)~~ of said row ~~(70)~~ with the first part of said image to be printed, and at least one second tangent ~~(84)~~ for said image in relation to a mathematically defined configuration ~~(72, 74)~~ relating to the rotation angle of the row and said distal end ~~(76, 78)~~, said second tangent making up a boundary for when a print out of said part image should take place;

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means for determining if said row ~~(70)~~ during movement is closing in to said second tangent ~~(84)~~ from the clockwise or counter clockwise direction;

means for providing a print out decision for a subsequent part image to be printed through said print-head ~~(60)~~ in front of a print out, if the row ~~(70)~~ is closing in clockwise to the second tangent ~~(84)~~ when using the upper distal end ~~(76)~~ of the row ~~(70)~~ as reference for the second tangent ~~(84)~~, and the vice versa when using the lower distal end ~~(78)~~ as reference for a sweep.

2. (currently amended) An assembly according to claim 1, wherein the print-head ~~(60)~~ is of the ink-jet type with spray nozzles ~~(12)~~ making up said row ~~(70)~~.

3. (original) An assembly according to claim 2, wherein the first and last nozzle in said row are references for said distal ends.

4. (currently amended) An assembly according to ~~claims 1-3~~ claim 1, wherein said mathematical configuration has one origin on at least one of the distal ends of said row.

5. (currently amended) An assembly according to ~~claims 1-4~~ claim 1, wherein said configuration is used for clockwise rotation and/or counter clockwise rotational print out feeding through said row.

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6. (currently amended) An assembly according to ~~claims 1-5~~claim 1, wherein said mathematical configuration is a line suitable for forward feeding of said array.

7. (currently amended) An assembly according to ~~claims 1-5~~claim 1, wherein said mathematical configuration is a curve suitable for rotation feeding of said array.

8. (currently amended) An assembly according to ~~claims 1-7~~claim 1, wherein a frame is related to each part image to be printed, thus defining every part image through at most four tangent coordinates for a first and a second tangent.

9. (original) An assembly according to claim 8, wherein coordinates for a frame are stored in a table sorted in accordance with corresponding part images to be printed.

10. (currently amended) An assembly according to claim 8 ~~or 9~~, wherein said frame is longer than the actual part image to be printed, whereby a next image to be printed is pre checked according to its alignment for printing.

11. (currently amended) An assembly according to ~~claims 1-9~~claim 1, wherein said array row is approximated with at least one half of a rectangle, thus facilitating the finding of a tangent for said row for a part image to be printed.

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12. (currently amended) A method for a sensor and print-head ~~(2)~~ assembly comprised in a housing ~~(1)~~ for a handheld and hand operated printing device controlled by a processor ~~(4)~~, comprising at least one sensor means ~~(S0, S1)~~ for keeping track of the assemblies and print-heads position on a print medium and a print-head array ~~(60)~~ characterized in that it comprises, during a print out sweep with said array, the steps of:

- determining the position of the array at each moment;
- predicting the positions of the array for subsequent moments in order to
- determine whether a text block or an image is about to be printed during said subsequent moments and if so
- deciding whether the complete text block or image, or a predefined part of the text block or the image will be covered by said array during said print out sweep, based on said predictions, and if not,
- omitting a print out of said text block or image, or said part of the text block or image during said print out sweep, otherwise
- printing out said text block or image during said print out sweep.

13. (currently amended) A method for a sensor and print-head ~~(2)~~ assembly comprised in a housing

~~(1)~~ for a hand-held and hand-operated printing device controlled by a processor ~~(4)~~, comprising at least one sensor means ~~(S0, S1)~~, a print-head array ~~(60)~~, input means

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~~(6)~~ on said housing ~~(1)~~ connected to said processor ~~(4)~~ for input of assembly control commands, and means for keeping track of the assemblies and print-heads position on a print medium, **characterized** in that it comprises, during a print out sweep with said array, the steps of:

determining the x and y coordinates for at least one distal end ~~(76, 78)~~ of at least one row ~~(70)~~ of printing means in said print head array ~~(60)~~, and the angle of rotation of said row ~~(70)~~ with reference to a base line, made up of coordinates for the long side of an image stored to be printed, whereby every dot of a part of an image to be printed having determinable corresponding x and y coordinates related to a determined position for said row ~~(70)~~;

determining an x and y coordinate for a first tangent ~~(80, 82)~~ of said row ~~(70)~~ with the first part of said image to be printed, and at least one second tangent (84) for said image in relation to a mathematically defined configuration ~~(72, 74)~~ relating to the rotation angle of the row and said distal end ~~(76, 78)~~, said second tangent making up a boundary for when a print out of said part image should take place;

determining if said row ~~(70)~~ during movement is closing in to said second tangent ~~(84)~~ from the clockwise or counter clockwise direction; and

providing a print out decision for a subsequent part image to be printed through said print-head ~~(60)~~ in front of a print out, if the row ~~(70)~~ is closing in clockwise to the second tangent ~~(84)~~ when using the upper distal end ~~(76)~~ of the row ~~(70)~~ as reference for

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reference for the second tangent ~~(84)~~, and the vice versa when using the lower distal end ~~(78)~~ as reference for a sweep.

14. (original) A method according to claim 13, wherein the print-head is of the ink-jet type with spray nozzles making up said row.

15. (original) A method according to claim 14, wherein the first and last nozzle in said row are references for said distal ends.

16. (currently amended) A method according to ~~claims 13-15~~ claim 13, wherein said mathematical configuration has one origin on at least one of the distal ends of said row.

17. (currently amended) A method according to ~~claims 13-16~~ claim 13, wherein said configuration is used for clockwise rotation and/or counter clockwise rotational print out feeding through said row.

18. (currently amended) A method according to ~~claims 13-17~~ claim 13, wherein said mathematical configuration is a line suitable for forward feeding with less rotation of said array.

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19. (currently amended) A method according to ~~claims 13-17~~claim 13, wherein said mathematical configuration is a curve suitable for rotation feeding of said array.

20. (currently amended) A method according to ~~claims 13-19~~claim 13, wherein a frame is related to each part image to be printed, thus defining every part image through at most four tangent coordinates for a first and a second tangent.

21. (original) A method according to claim 20, wherein coordinates for a frame are stored in a table sorted in accordance with corresponding part images to be printed.

22. (currently amended) A method according to claim 20 ~~or 21~~, wherein said frame is longer than the actual part image to be printed, whereby a next image to be printed is pre checked according to its alignment for printing.

23. (currently amended) A method according to ~~claims 13-22~~claim 13, wherein said array row is approximated with at least one half of a rectangle, thus facilitating the finding of a tangent for said row for a part image to be printed.